General

Guideline Title

Spondyloarthritis in over 16s: diagnosis and management.

Bibliographic Source(s)

National Institute for Health and Care Excellence (NICE). Spondyloarthritis in over 16s: diagnosis and management. London (UK): National Institute for Health and Care Excellence (NICE); 2017 Feb 28. 31 p. (NICE guideline; no. 65).

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

Note from the National Guideline Clearinghouse (NGC) and the National Institute for Health and Care Excellence (NICE): This guideline was developed by the National Institute for Health and Care Excellence (NICE) for the Department of Health. See the "Availability of Companion Documents" field for the full version of this guidance and related appendices.

The wording used in the recommendations in this guideline (for example words such as 'offer' and 'consider') denotes the certainty with which the recommendation is made (the strength of the recommendation) and is defined at the end of the "Major Recommendations" field.

Spondyloarthritis is a group of inflammatory conditions that have a range of manifestations. Spondyloarthritis may be predominantly:

- Axial:
  - Radiographic axial spondyloarthritis (ankylosing spondylitis)
  - Non-radiographic axial spondyloarthritis or
- Peripheral:
  - Psoriatic arthritis
  - Reactive arthritis
  - Enteropathic spondyloarthritis

People with predominantly axial spondyloarthritis may have additional peripheral symptoms, and vice versa.

Axial presentations of spondyloarthritis are often misdiagnosed as mechanical low back pain, leading to delays in access to effective treatments. Peripheral presentations are often seen as unrelated joint or tendon problems, and can be misdiagnosed because problems can move around

between joints.

Recognition and Referral in Non-specialist Care Settings

Do not rule out the possibility that a person has spondyloarthritis solely on the presence or absence of any individual sign, symptom or test result.

Suspecting Spondyloarthritis

Recognise that spondyloarthritis can have diverse symptoms and be difficult to identify, which can lead to delayed or missed diagnoses. Signs and symptoms may be musculoskeletal (for example, inflammatory back pain, enthesitis and dactylitis) or extra-articular (for example, uveitis and psoriasis [including psoriatic nail symptoms]). Risk factors include recent genitourinary infection and a family history of spondyloarthritis or psoriasis.

Be aware that axial and peripheral spondyloarthritis may be missed, even if the onset is associated with established comorbidities (for example, uveitis, psoriasis, inflammatory bowel disease [Crohn's disease or ulcerative colitis], or a gastrointestinal or genitourinary infection).

Be aware that axial spondyloarthritis:

- Affects a similar number of women as men
- Can occur in people who are human leukocyte antigen B27 (HLA-B27) negative
- May be present despite no evidence of sacroiliitis on a plain film X-ray

Referral for Suspected Axial Spondyloarthritis

If a person has low back pain that started before the age of 45 years and has lasted for longer than 3 months, refer the person to a rheumatologist for a spondyloarthritis assessment if 4 or more of the following additional criteria are also present:

- Low back pain that started before the age of 35 years (this further increases the likelihood that back pain is due to spondyloarthritis compared with low back pain that started between 35 and 44 years)
- Waking during the second half of the night because of symptoms
- Buttock pain
- Improvement with movement
- Improvement within 48 hours of taking non-steroidal anti-inflammatory drugs (NSAIDs)
- A first-degree relative with spondyloarthritis
- Current or past arthritis
- Current or past enthesitis
- Current or past psoriasis

If exactly 3 of the additional criteria are present, perform an HLA-B27 test. If the test is positive, refer the person to a rheumatologist for a spondyloarthritis assessment.

If the person does not meet the criteria in the recommendation above but clinical suspicion of axial spondyloarthritis remains, advise the person to seek repeat assessment if new signs, symptoms or risk factors listed in the recommendation above develop. This may be especially appropriate if the person has current or past inflammatory bowel disease (Crohn's disease or ulcerative colitis), psoriasis or uveitis (see "Referral for Suspected Acute Anterior Uveitis" section below for guidance on referral for immediate [same-day] ophthalmological assessment for people with acute anterior uveitis).

Referral for Suspected Psoriatic Arthritis and Other Peripheral Spondyloarthritides

For guidance on identifying spondyloarthritis in people with an existing diagnosis of psoriasis, see the section on assessment and referral for psoriatic arthritis in the NGC summary of the NICE guideline Psoriasis: the assessment and management of psoriasis.

Urgently refer people with suspected new-onset inflammatory arthritis to a rheumatologist for a spondyloarthritis assessment, unless rheumatoid arthritis, gout or acute calcium pyrophosphate (CPP) arthritis ('pseudogout') is suspected. If rheumatoid arthritis is suspected, see the section on referral for specialist treatment in the NICE guideline on rheumatoid arthritis in adults .

Refer people with dactylitis to a rheumatologist for a spondyloarthritis assessment.

Refer people with enthesitis without apparent mechanical cause to a rheumatologist for a spondyloarthritis assessment if:

- It is persistent or

- It is in multiple sites or
- Any of the following are also present:
  - Back pain without apparent mechanical cause
  - Current or past uveitis (see the "Referral for Suspected Acute Anterior Uveitis" section below for guidance on immediate [same-day] ophthalmological assessment for people with acute anterior uveitis)
  - Current or past psoriasis
  - Gastrointestinal or genitourinary infection
  - Inflammatory bowel disease (Crohn's disease or ulcerative colitis)
- A first-degree relative with spondyloarthritis or psoriasis

Recognising Psoriasis

If a person with suspected spondyloarthritis has signs or symptoms of undiagnosed psoriasis, follow the recommendations in the NGC summary of the NICE guideline Psoriasis: the assessment and management of psoriasis.

Referral for Suspected Acute Anterior Uveitis

Refer people for an immediate (same-day) ophthalmological assessment if they have symptoms of acute anterior uveitis (for example, eye pain, eye redness, sensitivity to light or blurred vision).

Case-finding in People with Acute Anterior Uveitis

Ophthalmologists should ask people with acute anterior uveitis whether they have:

- Consulted their general practitioner (GP) about joint pains or
- Experienced low back pain that started before the age of 45 years and has lasted for longer than 3 months

If the person meets either of the criteria in the recommendation above, establish whether they have psoriasis or skin complaints that appear psoriatic on physical examination.

- If they do, refer the person to a rheumatologist for a spondyloarthritis assessment.
- If they do not, perform an HLA-B27 test. If the test is positive, refer the person to a rheumatologist for a spondyloarthritis assessment.

Diagnosing Spondyloarthritis in Specialist Care Settings

Diagnostic Criteria for Suspected Spondyloarthritis

In specialist care settings, consider using validated spondyloarthritis criteria to guide clinical judgement when diagnosing spondyloarthritis. Examples include:

- General spondyloarthritis criteria:
  - Amor
  - European Spondyloarthropathy Study Group (ESSG)
- Axial spondyloarthritis criteria:
  - Assessment of Spondyloarthritis International Society (ASAS; axial)
  - Berlin
  - Rome
  - Modified New York
- Peripheral spondyloarthritis criteria:
  - ASAS (peripheral)
  - Classification of Psoriatic Arthritis (CASPAR)
- French Society of Rheumatology (reactive arthritis)

Do not rule out a diagnosis of spondyloarthritis solely on the basis of a negative HLA-B27 result.

Do not rule out a diagnosis of spondyloarthritis if a person's C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) are normal.

Imaging for Suspected Axial Spondyloarthritis

Initial Investigation Using X-ray

Offer plain film X-ray of the sacroiliac joints for people with suspected axial spondyloarthritis, unless the person is likely to have an immature skeleton.

Diagnose radiographic axial spondyloarthritis (ankylosing spondylitis) if the plain film X-ray shows sacroiliitis meeting the modified New York criteria (bilateral grade 2–4 or unilateral grade 3–4 sacroiliitis).

If the plain film X-ray does not show sacroiliitis meeting modified New York criteria (bilateral grade 2–4 or unilateral grade 3–4 sacroiliitis), or an X-ray is not appropriate because the person's skeleton is not fully mature, request unenhanced magnetic resonance imaging (MRI) using an inflammatory back pain protocol.

Subsequent Investigation Using MRI

Radiologists receiving a request for an inflammatory back pain MRI should perform short T1 inversion recovery (STIR), T1 (both views), cervical, thoracic and lumbar (whole spine, sagittal view), and sacroiliac joints (coronal oblique view).

Use the ASAS/Outcome Measures in Rheumatology (OMERACT) MRI criteria to interpret the MRI as follows:

- If the MRI meets the ASAS/OMERACT MRI criteria:
  - Diagnose non-radiographic axial spondyloarthritis
- If the MRI does not meet the ASAS/OMERACT MRI criteria:
  - Do not exclude the possibility of axial spondyloarthritis
  - Consider specialist musculoskeletal radiology review if there is disparity between the clinical suspicion and imaging findings, particularly in people with an immature skeleton
  - Offer an HLA-B27 test if it has not already been done. If positive, base the diagnosis of non-radiographic axial spondyloarthritis on clinical features, for example, using the clinical 'arm' of the ASAS axial classification criteria

If a diagnosis of axial spondyloarthritis cannot be confirmed and clinical suspicion remains high, consider a follow-up MRI.

Other Types of Imaging for Diagnosing Axial Spondyloarthritis

Do not offer scintigraphy for people with suspected axial spondyloarthritis.

Imaging for Suspected Psoriatic Arthritis and Other Peripheral Spondyloarthritides

Offer plain film X-ray of symptomatic hands and feet for people with suspected peripheral spondyloarthritis in these areas.

If a diagnosis cannot be made from the plain film X-ray, consider ultrasound of:

- The hands and feet to assess for joint involvement
- Suspected enthesitis sites

Consider plain film X-rays, ultrasound and/or MRI of other peripheral and axial symptomatic sites.

Interpret a positive HLA-B27 result as increasing the likelihood of peripheral spondyloarthritis.

If a diagnosis of peripheral spondyloarthritis is confirmed, offer plain film X-ray of the sacroiliac joints to assess for axial involvement, even if the person does not have any symptoms.

Antibody Testing for Suspected Reactive Arthritis

Do not routinely test for infective antibody status to diagnose reactive arthritis in people with a history of gastrointestinal infection.

Information and Support

Information about Spondyloarthritis

Provide people with spondyloarthritis, and their family members or carers (as appropriate), with information that is:

- Available on an ongoing basis
- Relevant to the stage of the person's condition
- Tailored to the person's needs

For more guidance on providing information to people and discussing their preferences with them, see the NICE guideline on patient experience in

adult National Health Service (NHS) services .

Provide explanations and information about spondyloarthritis, for example:

- What spondyloarthritis is
- Diagnosis and prognosis
- Treatment options (pharmacological and non-pharmacological), including possible side effects
- Likely symptoms and how they can be managed
- Flare episodes and extra-articular symptoms
- Self-help options
- Opportunities for people with spondyloarthritis to be involved in research
- Which healthcare professionals will be involved with the person's care and how to get in touch with them
- Information about employment rights and ability to work
- Local support groups, online forums and national charities, and how to get in touch with them

Information about Disease Flares

Advise people with spondyloarthritis about the possibility of experiencing flare episodes and extra-articular symptoms.

Consider developing a flare management plan that is tailored to the person's individual needs, preferences and circumstances.

When discussing any flare management plan, provide information on:

- Access to care during flares (including details of a named person to contact [for example, a specialist rheumatology nurse])
- Self-care (for example, exercises, stretching and joint protection)
- Pain and fatigue management
- Potential changes to medicines
- Managing the impact on daily life and ability to work

Pharmacological Management of Spondyloarthritis

Axial Spondyloarthritis

NSAIDs

Offer NSAIDs at the lowest effective dose to people with pain associated with axial spondyloarthritis, and think about appropriate clinical assessment, ongoing monitoring of risk factors, and the use of gastroprotective treatment.

If an NSAID taken at the maximum tolerated dose for 2 to 4 weeks does not provide adequate pain relief, consider switching to another NSAID.

Biological Disease-Modifying Antirheumatic Drugs (DMARDs) – Adalimumab, Certolizumab Pegol, Etanercept, Golimumab, and Infliximab for the Treatment of Ankylosing Spondylitis and Non-radiographic Axial Spondyloarthritis

Adalimumab, certolizumab pegol, etanercept, golimumab and infliximab are recommended, within their marketing authorisations, as options for treating severe active ankylosing spondylitis in adults whose disease has responded inadequately to, or who cannot tolerate, NSAIDs. Infliximab is recommended only if treatment is started with the least expensive infliximab product. People currently receiving infliximab should be able to continue treatment with the same infliximab product until they and their NHS clinician consider it appropriate to stop. (Note: This recommendation is from the NGC summary of the NICE technology appraisal TNF-alpha inhibitors for ankylosing spondylitis and non-radiographic axial spondyloarthritis.)

Adalimumab, certolizumab pegol and etanercept are recommended, within their marketing authorisations, as options for treating severe non-radiographic axial spondyloarthritis in adults whose disease has responded inadequately to, or who cannot tolerate, NSAIDs. (Note: This recommendation is from the NGC summary of the NICE technology appraisal TNF-alpha inhibitors for ankylosing spondylitis and non-radiographic axial spondyloarthritis.)

The choice of treatment should be made after discussion between the clinician and the patient about the advantages and disadvantages of the treatments available. This may include considering associated conditions such as extra-articular manifestations. If more than 1 treatment is suitable, the least expensive (taking into account administration costs and patient access schemes) should be chosen. (Note: This recommendation is from the NGC summary of the NICE technology appraisal TNF-alpha inhibitors for ankylosing spondylitis and non-radiographic axial spondyloarthritis.)

The response to adalimumab, certolizumab pegol, etanercept, golimumab or infliximab treatment should be assessed 12 weeks after the start of treatment. Treatment should only be continued if there is clear evidence of response, defined as:

- A reduction in the Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) score to 50% of the pre-treatment value or by 2 or more units and
- A reduction in the spinal pain visual analogue scale (VAS) by 2 cm or more

(Note: This recommendation is from the NGC summary of the NICE technology appraisal TNF-alpha inhibitors for ankylosing spondylitis and non-radiographic axial spondyloarthritis.)

Treatment with another TNFα inhibitor is recommended for people who cannot tolerate, or whose disease has not responded to, treatment with the first TNFα inhibitor, or whose disease has stopped responding after an initial response. (Note: This recommendation is from the NGC summary of the NICE technology appraisal TNF-alpha inhibitors for ankylosing spondylitis and non-radiographic axial spondyloarthritis.)

When using BASDAI and spinal pain VAS scores, healthcare professionals should take into account any physical, sensory or learning disabilities, or communication difficulties that could affect the responses to the questionnaires, and make any adjustments they consider appropriate. (Note: This recommendation is from the NGC summary of the NICE technology appraisal TNF-alpha inhibitors for ankylosing spondylitis and non-radiographic axial spondyloarthritis.)

Biological DMARDs – Secukinumab for the Treatment of Ankylosing Spondylitis

Secukinumab is recommended, within its marketing authorisation, as an option for treating active ankylosing spondylitis in adults whose disease has responded inadequately to conventional therapy (NSAIDs or TNF-α inhibitors). The drug is recommended only if the company provides it with the discount agreed in the patient access scheme. (Note: This recommendation is from NICE's technology appraisal guidance on secukinumab for active ankylosing spondylitis after treatment with nonsteroidal anti-inflammatory drugs or TNF-α inhibitors .)

Assess the response to secukinumab after 16 weeks of treatment and only continue if there is clear evidence of response, defined as:

- A reduction in the BASDAI score to 50% of the pre-treatment value or by 2 or more units and
- A reduction in the spinal pain VAS by 2 cm or more

(Note: This recommendation is from NICE's technology appraisal guidance on secukinumab for active ankylosing spondylitis after treatment with nonsteroidal anti-inflammatory drugs or TNF-α inhibitors .)

When using BASDAI and spinal pain VAS scores, healthcare professionals should take into account any physical, sensory or learning disabilities, or communication difficulties that could affect the responses to the questionnaires, and make any adjustments they consider appropriate. (Note: This recommendation is from NICE's technology appraisal guidance on secukinumab for active ankylosing spondylitis after treatment with nonsteroidal anti-inflammatory drugs or TNF-α inhibitors .)

Psoriatic Arthritis and Other Peripheral Spondyloarthritides

Non-biological Therapies

Consider local corticosteroid injections as monotherapy for non-progressive monoarthritis.

Offer standard DMARDs to people with:

- Peripheral polyarthritis
- Oligoarthritis
- Persistent or progressive monoarthritis associated with peripheral spondyloarthritis

When deciding which standard DMARD to offer, take into account:

- The person's needs, preferences and circumstances (such as pregnancy planning and alcohol consumption)
- Comorbidities such as uveitis, psoriasis and inflammatory bowel disease
- Disease characteristics
- Potential side effects

If a standard DMARD taken at the maximum tolerated dose for at least 3 months does not provide adequate relief from symptoms, consider switching to or adding another standard DMARD.

Consider NSAIDs as an adjunct to standard DMARDs or biological DMARDs to manage symptoms. Use oral NSAIDs at the lowest effective dose for the shortest possible period of time, and think about appropriate clinical assessment, ongoing monitoring of risk factors, and the use of gastroprotective treatment.

If NSAIDs do not provide adequate relief from symptoms, consider steroid injections (local or intramuscular) or short-term oral steroid therapy as an adjunct to standard DMARDs or biological DMARDs to manage symptoms.

If extra-articular disease is adequately controlled by an existing standard DMARD but peripheral spondyloarthritis is not, consider adding another standard DMARD.

Targeted Synthetic DMARDs – Apremilast for the Treatment of Psoriatic Arthritis

For guidance on treating psoriatic arthritis with apremilast, see NICE's technology appraisal guidance on apremilast for treating active psoriatic arthritis .

Biological DMARDs – Etanercept, Infliximab and Adalimumab for the Treatment of Psoriatic Arthritis

Etanercept, infliximab and adalimumab are recommended for the treatment of adults with active and progressive psoriatic arthritis when the following criteria are met.

- The person has peripheral arthritis with 3 or more tender joints and 3 or more swollen joints, and
- The psoriatic arthritis has not responded to adequate trials of at least 2 standard DMARDs, administered either individually or in combination

(Note: This recommendation is from NICE's technology appraisal guidance on etanercept, infliximab and adalimumab for the treatment of psoriatic arthritis .)

Treatment as described in the recommendation above should normally be started with the least expensive drug (taking into account drug administration costs, required dose and product price per dose). This may need to be varied for individual patients because of differences in the method of administration and treatment schedules. (Note: This recommendation is from NICE's technology appraisal guidance on etanercept, infliximab and adalimumab for the treatment of psoriatic arthritis .)

Etanercept, adalimumab or infliximab treatment should be discontinued in people whose psoriatic arthritis has not shown an adequate response using the Psoriatic Arthritis Response Criteria (PsARC) at 12 weeks. An adequate response is defined as an improvement in at least 2 of the 4 PsARC criteria (1 of which has to be joint tenderness or swelling score) with no worsening in any of the 4 criteria. People whose disease has a Psoriasis Area and Severity Index (PASI) 75 response at 12 weeks but whose PsARC response does not justify continuation of treatment should be assessed by a dermatologist to determine whether continuing treatment is appropriate on the basis of skin response (see etanercept and efalizumab for the treatment of adults with psoriasis [NICE technology appraisal guidance 103], infliximab for the treatment of adults with psoriasis [NICE technology appraisal guidance 134], and adalimumab for the treatment of adults with psoriasis [NICE technology appraisal guidance 146] for guidance on the use of TNF inhibitors in psoriasis). (Note: This recommendation is from NICE's technology appraisal guidance on etanercept, infliximab and adalimumab for the treatment of psoriatic arthritis .)

When using the PsARC healthcare professionals should take into account any physical, sensory or learning disabilities, or communication difficulties that could affect a person's responses to components of the PsARC and make any adjustments they consider appropriate. (Note: This recommendation is from NICE's technology appraisal guidance on etanercept, infliximab and adalimumab for the treatment of psoriatic arthritis .)

Biological DMARDs – Golimumab for the Treatment of Psoriatic Arthritis

Golimumab is recommended as an option for the treatment of active and progressive psoriatic arthritis in adults only if:

- It is used as described for other TNF-inhibitor treatments in etanercept, infliximab and adalimumab for the treatment of psoriatic arthritis (NICE technology appraisal guidance 199; see "Biological DMARDs – Etanercept, Infliximab and Adalimumab for the Treatment of Psoriatic Arthritis") and
- The manufacturer provides the 100 mg dose of golimumab at the same cost as the 50 mg dose

(Note: This recommendation is from NICE's technology appraisal guidance on golimumab for the treatment of psoriatic arthritis .)

When using the PsARC (as set out in NICE technology appraisal guidance 199; see "Biological DMARDs – Etanercept, Infliximab and Adalimumab for the Treatment of Psoriatic Arthritis"), healthcare professionals should take into account any physical, sensory or learning disabilities, or communication difficulties that could affect a person's responses to components of the PsARC and make any adjustments they consider appropriate. (Note: This recommendation is from NICE's technology appraisal guidance on golimumab for the treatment of psoriatic arthritis .)

Biological DMARDs – Ustekinumab for the Treatment of Psoriatic Arthritis

Ustekinumab is recommended as an option, alone or in combination with methotrexate, for treating active psoriatic arthritis in adults only when:

- Treatment with TNF-α inhibitors is contraindicated but would otherwise be considered (as described in NICE technology appraisal guidance on etanercept, infliximab and adalimumab for the treatment of psoriatic arthritis [NICE technology appraisal guidance 199; see "Biological DMARDs – Etanercept, Infliximab and Adalimumab for the Treatment of Psoriatic Arthritis"], and golimumab for the treatment of psoriatic arthritis [NICE technology appraisal guidance 220; see "Biological DMARDs – Golimumab for the Treatment of Psoriatic Arthritis"]) or
- The person has had treatment with 1 or more TNF-α inhibitors

Ustekinumab is recommended only if the company provides the 90 mg dose of ustekinumab for people who weigh more than 100 kg at the same cost as the 45 mg dose, as agreed in the patient access scheme. (Note: This recommendation is from NICE's technology appraisal guidance on ustekinumab for treating active psoriatic arthritis .)

Ustekinumab treatment should be stopped if the person's psoriatic arthritis has not shown an adequate response using the PsARC at 24 weeks. An adequate response is defined as an improvement in at least 2 of the 4 criteria (1 of which must be joint tenderness or swelling score), with no worsening in any of the 4 criteria. As recommended in NICE technology appraisal guidance on etanercept, infliximab and adalimumab for the treatment of psoriatic arthritis (see "Biological DMARDs – Etanercept, Infliximab and Adalimumab for the Treatment of Psoriatic Arthritis"), people whose disease has a PASI 75 response but whose PsARC response does not justify continuing treatment should be assessed by a dermatologist to determine whether continuing treatment is appropriate on the basis of skin response (see NICE technology appraisal guidance on ustekinumab for the treatment of adults with moderate to severe psoriasis). (Note: This recommendation is from NICE's technology appraisal guidance on ustekinumab for treating active psoriatic arthritis.)

When using the PsARC healthcare professionals should take into account any physical, sensory or learning disabilities, or communication difficulties that could affect a person's responses to components of the PsARC and make any adjustments they consider appropriate. (Note: This recommendation is from NICE's technology appraisal guidance on ustekinumab for treating active psoriatic arthritis .)

People whose treatment with ustekinumab is not recommended in this NICE guidance, but was started within the NHS before this guidance was published, should be able to continue ustekinumab until they and their NHS clinician consider it appropriate to stop. (Note: This recommendation is from NICE's technology appraisal guidance on ustekinumab for treating active psoriatic arthritis .)

Reactive Arthritis

Antibiotics

After treating the initial infection, do not offer long-term (4 weeks or longer) treatment with antibiotics solely to manage reactive arthritis caused by a gastrointestinal or genitourinary infection.

Non-pharmacological Management of Spondyloarthritis

Refer people with axial spondyloarthritis to a specialist physiotherapist to start an individualised, structured exercise programme, which should include:

- Stretching, strengthening and postural exercises
- Deep breathing
- Spinal extension
- Range of motion exercises for the lumbar, thoracic and cervical sections of the spine
- Aerobic exercise

Consider hydrotherapy as an adjunctive therapy to manage pain and maintain or improve function for people with axial spondyloarthritis.

Consider a referral to a specialist therapist (such as a physiotherapist, occupational therapist, hand therapist, orthotist or podiatrist) for people with

spondyloarthritis who have difficulties with any of their everyday activities. The specialist therapist should:

- Assess people's needs
- Provide advice about physical aids
- Arrange periodic reviews to assess people's changing needs

Surgery for Spondyloarthritis

Do not refer people with axial spondyloarthritis to a complex spinal surgery service to be assessed for spinal deformity correction unless the spinal deformity is:

- Significantly affecting their quality of life and
- Severe or progressing despite optimal non-surgical management (including physiotherapy)

If a person with axial spondyloarthritis presents with a suspected spinal fracture, refer them to a specialist to confirm the spinal fracture and carry out a stability assessment. After the stability assessment, the specialist should refer people with a potentially unstable spinal fracture to a spinal surgeon.

Managing Flares

Manage flares in either specialist care or primary care depending on the person's needs.

When managing flares in primary care, seek advice from specialist care as needed, particularly for people who:

- Have recurrent or persistent flares
- Are taking biological DMARDs
- Have comorbidities that may affect treatment or management of flares

Be aware that uveitis can occur during flare episodes. See the "Referral for Suspected Acute Anterior Uveitis" section above for guidance on immediate (same-day) ophthalmological assessment for people with acute anterior uveitis.

Long-term Complications

For guidance on monitoring long-term pharmacological treatments, see the NGC summary of the NICE guideline Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes.

Take into account the adverse effects associated with NSAIDs, standard DMARDs and biological DMARDs when monitoring spondyloarthritis in primary care.

Advise people that there may be a greater risk of skin cancer in people treated with TNF-α inhibitors.

Discuss risk factors for cardiovascular comorbidities with all people with spondyloarthritis.

Consider regular osteoporosis assessments (every 2 years) for people with axial spondyloarthritis. Be aware that bone mineral density measures may be elevated on spinal dual-energy X-ray absorptiometry (DEXA) due to the presence of syndesmophytes and ligamentous calcification, whereas hip measurements may be more reliable.

Advise people with axial spondyloarthritis that they may be prone to fractures, and should consult a healthcare professional following falls or physical trauma, particularly in the event of increased musculoskeletal pain.

Organisation of Care

Coordinating Care across Settings

Commissioners should ensure that local arrangements are in place to coordinate care for people across primary and secondary (specialist) care. These should cover:

- Prescribing NSAIDs and standard DMARDs
- Monitoring NSAIDs, standard DMARDs and biological DMARDs
- Managing flares
- Ensuring prompt access to specialist rheumatology care when needed
- Ensuring prompt access to other specialist services to manage comorbidities and extra-articular symptoms

Ensure that people with spondyloarthritis have access to specialist care in primary or secondary care settings throughout the disease course to ensure optimal long-term spondyloarthritis management (see the "Managing Flares" section above for arrangements for managing flares).

Ensure that there is effective communication and coordination between all healthcare professionals involved in the person's care, particularly if the person has comorbidities or extra-articular symptoms.

Ensure that there is communication and coordination between rheumatology and other relevant specialties (such as dermatology, gastroenterology and ophthalmology). This is particularly important for people who:

- Are already receiving standard DMARDs or biological DMARDs for another condition
- Need to start taking standard DMARDs or biological DMARDs for another condition

For guidance on managing the transition of young people with juvenile idiopathic arthritis to adult services, see the NICE guideline on transition from children's to adults' services for young people using health or social care services .

Definitions

Strength of Recommendations

Some recommendations can be made with more certainty than others. The Committee makes a recommendation based on the trade-off between the benefits and harms of an intervention, taking into account the quality of the underpinning evidence. For some interventions, the Committee is confident that, given the information it has looked at, most patients would choose the intervention. The wording used in the recommendations in this guideline denotes the certainty with which the recommendation is made (the strength of the recommendation).

Recommendations That Must (or Must Not) Be Followed

The Committee usually uses 'must' or 'must not' only if there is a legal duty to apply the recommendation. Occasionally the Committee uses 'must' (or 'must not') if the consequences of not following the recommendation could be extremely serious or potentially life threatening.

Recommendations That Should (or Should Not) Be Followed – a 'Strong' Recommendation

The Committee uses 'offer' (and similar words such as 'refer' or 'advise') when confident that, for the vast majority of patients, an intervention will do more good than harm, and be cost effective. Similar forms of words (for example, 'Do not offer…') are used when the Committee is confident that an intervention will not be of benefit for most patients.

Recommendations That Could Be Followed

The Committee uses 'consider' when confident that an intervention will do more good than harm for most patients, and be cost effective, but other options may be similarly cost effective. The choice of intervention, and whether or not to have the intervention at all, is more likely to depend on the patient's values and preferences than for a strong recommendation, and so the healthcare professional should spend more time considering and discussing the options with the patient.

Clinical Algorithm(s)

A National Institute for Health and Care Excellence (NICE) interactive flowchart titled "Spondyloarthritis Overview" is available on the NICE Web site .

Scope

Disease/Condition(s)

- Axial spondyloarthritis, including radiographic axial spondyloarthritis (ankylosing spondylitis) and non-radiographic axial spondyloarthritis
- Peripheral spondyloarthritis, including psoriatic arthritis, reactive arthritis, and enteropathic spondyloarthritis

Guideline Category

Diagnosis

Evaluation

Management

Treatment

Clinical Specialty

Dermatology

Family Practice

Gastroenterology

Internal Medicine

Ophthalmology

Radiology

Rheumatology

Surgery

Intended Users

Advanced Practice Nurses

Nurses

Patients

Physician Assistants

Physicians

Guideline Objective(s)

- To raise awareness of the features of spondyloarthritis and provide clear advice on what action to take when people with signs and symptoms first present in healthcare settings
- To provide advice on the interventions available to people with spondyloarthritis
- To provide advice on how care for people with spondyloarthritis should be organised across healthcare settings, and what information and support should be provided

Target Population

- Young people aged 16 years and older and adults with suspected or confirmed spondyloarthritis*
- Young people and adults with spondyloarthritis whose symptoms developed in childhood, including people who have previously been diagnosed with enthesitis-related and psoriatic-related juvenile idiopathic arthritis

*Note: This includes people with ankylosing spondylitis, non-radiographic axial spondyloarthritis, enteropathic arthritis, reactive arthritis related to human leukocyte antigen B27 (HLA B27), psoriatic arthritis, and undifferentiated spondyloarthritis.

Note: The following patient subgroups have been identified as needing specific consideration: women with axial spondyloarthritis and people with comorbidities related to HLA B27 (such as inflammatory bowel disease and psoriasis) that may influence the choice of therapeutic agents and the ongoing management plan.

Groups not covered by the guideline: People whose signs or symptoms are caused by rheumatoid arthritis, osteoarthritis or gout; people with reactive arthritis confirmed as unrelated to salmonella, shigella, yersinia, campylobacter or chlamydia; and children and young people under the age of 16 years.

Interventions and Practices Considered

Diagnosis/Evaluation

1. Recognition of signs and symptoms of spondyloarthritis and referral in non-specialist care settings
2. Diagnosing spondyloarthritis in specialist care settings
    - Diagnostic criteria for suspected spondyloarthritis
    - Imaging for suspected axial spondyloarthritis (X-ray, magnetic resonance imaging [MRI])
    - Imaging for suspected psoriatic arthritis and other peripheral spondyloarthritides (MRI, ultrasound)
    - Human leukocyte antigen B27 (HLA-B27) testing
    - Antibody testing for suspected reactive arthritis (not routinely recommended)

Treatment/Management

1. Providing information and support about spondyloarthritis including information about managing disease flares
2. Pharmacological management of spondyloarthritis
    - Non-steroidal anti-inflammatory drugs (NSAIDs) for axial spondyloarthritis
    - Biological disease-modifying anti-rheumatic drugs (DMARDs) (adalimumab, certolizumab pegol, etanercept, golimumab and infliximab) for the treatment of ankylosing spondylitis and non-radiographic axial spondyloarthritis
    - Secukinumab for the treatment of ankylosing spondylitis
    - Non-biological therapies for psoriatic arthritis and other peripheral spondyloarthritides (e.g., local corticosteroid injection, standard DMARDs, NSAIDs, oral steroids)
    - Targeted synthetic DMARD (apremilast) for the treatment of psoriatic arthritis
    - Biological DMARDS (etanercept, infliximab, adalimumab, golimumab, ustekinumab) for the treatment of psoriatic arthritis
    - Antibiotics for reactive arthritis (for initial infection; not recommended long-term)
    - Monitoring response to therapy using standard rating systems
3. Non-pharmacological management of spondyloarthritis
    - Exercise and physical therapy
    - Hydrotherapy
    - Referral to physiotherapist, occupational therapist, hand therapist, orthotist or podiatrist
4. Surgery for spondyloarthritis
5. Managing flares
6. Monitoring and managing long-term complications (adverse effects of treatments, osteoporosis, fractures, cardiovascular comorbidities)
7. Organisation and coordination of care across settings

Note: Scintigraphy is considered but not recommended.

Major Outcomes Considered

- Sensitivity, specificity, positive and negative predictive value, and likelihood ratios of diagnostic tests
- Functional capacity (using the Health Assessment Questionnaire or the Bath Ankylosing Spondylitis Functional Index [BASFI])
- Health-related quality of life (using a generic quality-of-life scale such as EuroQol five dimensions questionnaire [EQ-5D])
- Disease-specific quality of life
- Fatigue
- Pain
- Mental health
- Disease activity and measures of treatment response (such as the psoriatic arthritis response criteria [PsARC], the American College of Rheumatology Criteria [ACR20/50/70], and the Bath Ankylosing Spondylitis Disease Activity Index [BASDAI])
- Radiological assessment of disease progression or remission
- Adverse events
- Tolerance of treatments
- Mobility
- Long-term sequelae of treatments
- Cost-effectiveness

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Note from the National Guideline Clearinghouse (NGC): This guideline was developed by the National Institute for Health and Care Excellence (NICE) for the Department of Health. See the "Availability of Companion Documents" field for the full version of this guidance and related appendices.

Search Strategies

This guideline was developed in accordance with the process set out in 'The guidelines manual (2012)' (see the "Availability of Companion Documents" field).

Scoping Searches

See Appendix D in the full version of the guideline (see the "Availability of Companion Documents" field) for the list of Web sites and databases (listed in alphabetical order) that were undertaken in March/April 2014 to provide information for scope development and project planning. Browsing or simple search strategies were employed.

Main Searches

Sources searched for the guideline:

- Allied and Complementary Medicine (AMED) Health Databases Advanced Search (HDAS)
- Cumulative Index to Nursing and Allied Health Literature (CINAHL) (HDAS)
- Cochrane Database of Systematic Reviews – CDSR (Wiley)
- Cochrane Central Register of Controlled Trials – CENTRAL (Wiley)
- Database of Abstracts of Reviews of Effects – DARE (Wiley)
- Health Technology Assessment Database – HTA (Wiley)
- EMBASE (Ovid)
- MEDLINE (Ovid)
- MEDLINE In-Process (Ovid)

Identification of Evidence for Clinical Questions

The searches were conducted between September 2014 and October 2015.

Cochrane databases (CDSR, CENTRAL, DARE HTA), AMED and CINAHL were searched at the start of the guideline using broad population terms in the randomised controlled trials (RCT)/systematic review search questions and again at the re-runs.

The re-run searches took place in March and June 2016 using population only terms. The aim of the searches was to identify evidence for each of the clinical questions being asked (see Appendix D for the list of clinical questions and detailed search strategy for each question, and for study design filters).

Health Economics Search Strategy

Sources searched to identify economic evaluations:

- National Health Service Economic Evaluation Database – NHS EED (Wiley)
- Health Economic Evaluations Database – HEED (Wiley)
- EconLit (Ovid)
- EMBASE (Ovid)
- MEDLINE (Ovid)
- MEDLINE In-Process (Ovid)

Search filters to retrieve economic evaluations and quality of life papers were appended to population search terms to identify relevant evidence between September 2014 and May 2016. The re-run searches took place in June 2016. EconLit (Ovid) was searched in May 2016 and June 2016 since NHS EED became a legacy database.

See Appendix D in the full version of the guideline for information on the economic search strategy and health economics filters.

Number of Source Documents

Refer to Appendix L in the full version of the guideline (see the "Availability of Companion Documents" field) for flowcharts summarising the number of included and excluded studies for each review question.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Overall Quality of Outcome Evidence in Grading of Recommendations Assessment, Development and Evaluation (GRADE)

Level	Description
High	Further research is very unlikely to change confidence in the estimate of effect.
Moderate	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.
Low	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate.
Very Low	Any estimate of effect is very uncertain.

Methods Used to Analyze the Evidence

Meta-Analysis

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Note from the National Guideline Clearinghouse (NGC): This guideline was developed by the National Institute for Health and Care Excellence (NICE) for the Department of Health. See the "Availability of Companion Documents" field for the full version of this guidance and related appendices.

Evidence Synthesis and Meta-analyses

Where possible, meta-analyses were conducted to combine the results of studies for each outcome. For continuous outcomes, where changes from baseline data were reported in the trials and were accompanied by a measure of spread (for example, standard deviation), these were extracted and used in the meta-analysis. Where measures of spread for change from baseline values were not reported, the corresponding values at study end were used and were combined with change from baseline values to produce summary estimates of effect. These studies were assessed to ensure that baseline values were balanced across the treatment groups; if there were significant differences at baseline these studies were not included in any meta-analysis and were reported separately.

Evidence of Effectiveness of Interventions

Quality Assessment

Grading of Recommendations Assessment, Development and Evaluation (GRADE) was used to assess the quality of evidence for the selected outcomes as specified in the guidelines manual. Where randomised controlled trials (RCTs) are possible, these are initially rated as high quality and the quality of the evidence for each outcome was downgraded or not from this initial point. If non-RCT evidence was included for intervention-type systematic reviews then these are initially rated as low quality and the quality of the evidence for each outcome was further downgraded or not from this point.

Methods for Combining Intervention Evidence

Meta-analyses of interventional data were conducted with reference to the Cochrane Handbook for Systematic Reviews of Interventions.

A pooled relative risk was calculated for dichotomous outcomes (using the Mantel–Haenszel method).

Random-effects models (der Simonian and Laird) were fitted for all syntheses, as a conservative approach that reflected the underlying clinical heterogeneity of interventions (for example, complex non-pharmacological programmes), regardless of whether such heterogeneity could be statistically identified.

Meta-analyses were performed in Cochrane Review Manager v5.3.

GRADE for Pairwise Meta-analyses for Interventional Evidence

The quality of the evidence for each outcome was downgraded where appropriate for the reasons outlined in Table 1 (see the full version of the guideline).

Diagnostic Evidence

A number of questions in this guideline relied on diagnostic accuracy evidence. It should be noted that the term 'diagnostic accuracy' does not necessarily imply that the data – and the features they represent – should be used for strictly diagnostic purposes; indeed, these data span questions regarding suspicion, referral and formal diagnosis, in this guideline. From a methodological point of view, diagnostic accuracy data may be classified as any data in which a feature – be it a symptom, a risk factor, a test result or the output of some algorithm that combines many such features – is observed in some people who have the condition of interest and some people who do not. Such data either explicitly provide, or can be manipulated to generate, a 2x2 classification of true positives and false negatives (in people who, according to the reference standard, truly have spondyloarthritis) and false positives and true negatives (in people who, according to the reference standard, do not).

The 'raw' 2x2 data can be summarised in a variety of ways. Those that were used for decision making in this guideline are as follows:

- Positive likelihood ratios describe how many times more likely positive features are in people with spondyloarthritis compared with people without spondyloarthritis.
- Negative likelihood ratios describe how many times less likely negative features are in people with spondyloarthritis compared with people without spondyloarthritis.
- Sensitivity is the probability that the feature will be positive in a person with spondyloarthritis.
- Specificity is the probability that the feature will be negative in a person without spondyloarthritis.

The Guideline Development Group (GDG) put particular priority on positive and negative likelihood ratios in their decision making. See Table 2 in the full version of the guideline for interpretation of likelihood ratios. This schema has the effect of setting a minimally important difference for a positive likelihood ratio at 2, and a corresponding minimally important difference for negative likelihood ratios at 0.5. Likelihood ratios (whether positive or negative) falling between these thresholds were judged to indicate no meaningful change to probability of disease.

Methods for Combining Diagnostic Evidence

Meta-analysis of diagnostic test accuracy data was conducted with reference to the *Cochrane Handbook for Systematic Reviews of Diagnostic Test Accuracy*.

All diagnostic syntheses were doubly stratified:

- By presenting symptomatology:
  - People with predominantly axial symptoms
  - People with predominantly peripheral symptoms
  - Mixed studies including people with axial and/or peripheral symptoms
- By reference standard:

- Expert clinician diagnosis
- Diagnosis according to published criteria

Each data point was categorised according to these features to create up to 6 substrata with separate summary estimates.

Separate pooling was performed for positive likelihood ratios, negative likelihood ratios, sensitivity and specificity.

Random-effects models (der Simonian and Laird) were fitted for all syntheses, as recommended in the Cochrane Handbook for Systematic Reviews of Diagnostic Test Accuracy. Diagnostic meta-analyses were performed in Microsoft Excel.

Refer to the full version of the guideline for additional information on methods for combining diagnostic evidence.

Modified GRADE for Diagnostic Evidence

GRADE has not been developed for use with diagnostic studies; therefore a modified approach was applied using the GRADE framework. GRADE assessments were only undertaken for positive and negative likelihood ratios, as these were preferred by the GDG as summary measures of diagnostic accuracy.

Cross-sectional and cohort studies were initially rated as high-quality evidence if well conducted, and then downgraded according to the standard GRADE criteria (risk of bias, inconsistency, imprecision and indirectness) as detailed in Table 3 in the full version of the guideline.

Methods for Combining Direct and Indirect Evidence (Network Meta-analysis) (NMA)

Synthesis

Hierarchical Bayesian NMA was performed using WinBUGS version 1.4.3. The models used reflected the recommendations of the NICE Decision Support Unit's Technical Support Documents (TSDs) on evidence synthesis, particularly TSD 2 (A generalised linear modelling framework for pairwise and network meta-analysis of randomised controlled trials). The WinBUGS code provided in the appendices of TSD 2 was used without substantive alteration to specify synthesis models.

Results were reported summarising 70,000 samples from the posterior distribution of each model, having first run and discarded 35,000 'burn-in' iterations. Three separate chains with different initial values were used.

Prior Distributions

Non-informative prior distributions were used in all models. Unless otherwise specified, trial-specific baselines and treatment effects were assigned N(0, 1000) priors, and the between-trial standard deviations used in random-effects models were given U(0, 5) priors. These are consistent with the recommendations in TSD 2 for dichotomous outcomes.

Applying GRADE to Network Meta-analysis

The use of GRADE to assess the quality of studies addressing a particular review question for pairwise comparisons of interventions is relatively established. However, the use of GRADE to assess the quality of evidence across a network meta-analysis is still a developing methodology. While most criteria for pairwise meta-analyses still apply, it is important to adapt some of the criteria to take into consideration additional factors, such as how each 'link' or pairwise comparison within the network applies to the others.

See the full version of the guideline for details on applying GRADE to NMA.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Note from the National Guideline Clearinghouse (NGC): This guideline was developed by the National Institute for Health and Care Excellence (NICE) for the Department of Health. See the "Availability of Companion Documents" field for the full version of this guidance and related appendices.

Methods

This guideline was developed in accordance with the process set out in 'The guidelines manual (2012)' (see the "Availability of Companion Documents" field). There is more information about how NICE clinical guidelines are developed on the NICE Web site. A booklet, 'How NICE clinical guidelines are developed: an overview for stakeholders, the public and the NHS' is available. In instances where the guidelines manual does not provide advice, additional methods are used.

Rating Scheme for the Strength of the Recommendations

Strength of Recommendations

Some recommendations can be made with more certainty than others. The committee makes a recommendation based on the trade-off between the benefits and harms of an intervention, taking into account the quality of the underpinning evidence. For some interventions, the Guideline Committee (GC) is confident that, given the information it has looked at, most patients would choose the intervention. The wording used in the recommendations in this guideline denotes the certainty with which the recommendation is made (the strength of the recommendation).

Interventions That Must (or Must Not) Be Used

The committee usually uses 'must' or 'must not' only if there is a legal duty to apply the recommendation. Occasionally 'must' (or 'must not') is used if the consequences of not following the recommendation could be extremely serious or potentially life threatening.

Interventions That Should (or Should Not) Be Used – a 'Strong' Recommendation

The committee uses 'offer' (and similar words such as 'refer' or 'advise') when confident that, for the vast majority of patients, an intervention will do more good than harm, and be cost effective. Similar forms of words are used (for example, 'do not offer…') when the GC is confident that an intervention will not be of benefit for most patients.

Interventions That Could Be Used

The committee uses 'consider' when confident that an intervention will do more good than harm for most patients, and be cost effective, but other options may be similarly cost effective. The choice of intervention, and whether or not to have the intervention at all, is more likely to depend on the patient's values and preferences than for a strong recommendation, and so the healthcare professional should spend more time considering and discussing the options with the patient.

Cost Analysis

See the "Health Economic Evidence" and "Economic Considerations" sections for each review question in the full version of the guideline. See also Appendix H, "Full Health Economics Report" (see the "Availability of Companion Documents" field).

Original Health Economics Analysis

The Guideline Development Group (GDG) identified the recognition and appropriate referral of axial spondyloarthritis as its key priority for original health economic analysis. The group advised that delayed diagnosis is a significant issue in all spondyloarthritis, but that people with axial symptoms are subject to particularly damaging delays, invariably because their symptoms are misidentified as mechanical back pain. The GDG emphasised that, if people with axial disease could be identified more reliably when they first present, they would gain access to effective treatments, improving their quality of life and their chances of long-term disease modification.

Accordingly, the original model was devised to estimate quality of life and costs (over a lifetime) of people who are and are not correctly referred, having presented with symptoms that might indicate axial spondyloarthritis. It has a 3-month cycle length and a lifetime time horizon, and adopts a patient perspective for outcomes and a National Health Service (NHS) perspective for costs.

In reflection of the diagnostic accuracy evidence, the simulated population comprises people with chronic back pain of at least 3 months' duration that began at age 45 or younger. Using data from a large inception study, the ankylosing spondylitis (AS) cohort was assumed to be 64% male with an average age of 30.4 (95% confidence interval [CI]: 29.0 to 31.8), and the non-radiographic axial spondyloarthritis (nrAxSpA) cohort was 43% male and had a mean age of 33.2 (95% CI: 31.8 to 34.6). Figure 1 in the full version of the guideline (see the "Availability of Companion Documents" field) provides a schematic depiction of the model structure. Refer to the full version of the guideline and Appendix H for results and discussion of the economic analysis.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

The guideline was validated through two consultations.

1. The first draft of the guideline (the full guideline, National Institute for Health and Care Excellence [NICE] guideline) were consulted with Stakeholders and comments were considered by the Guideline Development Group (GDG).
2. The final consultation draft of the Full guideline, the NICE guideline and the Information for the Public were submitted to stakeholders for final comments.

The final draft was submitted to the Guideline Review Panel for review prior to publication.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence supporting each recommendation is not specifically stated.

The type and quality of evidence supporting each review question are described in the evidence review sections in the full version of the guideline (see the "Availability of Companion Documents" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Possible increase in correct diagnoses
- Pain reduction/relief
- Prevention of disease progression

Refer to the "Trade-off between benefits and harms" sections in the full version of the guideline (see the "Availability of Companion Documents" field) for details about benefits of specific systems, processes, policies and interventions for diagnosing and management of spondyloarthritis in over 16s.

Potential Harms

- Adverse effects associated with nonsteroidal anti-inflammatory drugs (NSAIDs), standard disease-modifying anti-rheumatic drugs (DMARDs) and biological DMARDs
- There may be a greater risk of skin cancer in people treated with tumour necrosis factor (TNF)-alpha inhibitors.

Refer to the "Trade-off between benefits and harms" sections in the full version of the guideline (see the "Availability of Companion Documents" field) for details about potential harms of specific systems, processes, policies and interventions for diagnosing and management of spondyloarthritis in over 16s.

Contraindications

Contraindications

- The use of back braces in ankylosing spondylitis may be contraindicated, particularly during inflammation.
- Contraindications for particular disease-modifying anti-rheumatic drugs (DMARDs) include contraindications associated with pregnancy or high levels of alcohol consumption.

Qualifying Statements

Qualifying Statements

- The recommendations in this guideline represent the view of the National Institute for Health and Care Excellence (NICE), arrived at after careful consideration of the evidence available. When exercising their judgement, professionals are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or service users. The application of the recommendations in this guideline is not mandatory and the guideline does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.
- Local commissioners and/or providers have a responsibility to enable the guideline to be applied when individual health professionals and their patients or service users wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

Implementation of the Guideline

Description of Implementation Strategy

Putting This Guideline into Practice

The National Institute for Health and Care Excellence (NICE) has produced tools and resources to help you put this guideline into practice (see also the "Availability of Companion Documents" field).

Putting recommendations into practice can take time. How long may vary from guideline to guideline, and depends on how much change in practice or services is needed. Implementing change is most effective when aligned with local priorities.

Changes recommended for clinical practice that can be done quickly – like changes in prescribing practice – should be shared quickly. This is because healthcare professionals should use guidelines to guide their work – as is required by professional regulating bodies such as the General Medical and Nursing and Midwifery Councils.

Changes should be implemented as soon as possible, unless there is a good reason for not doing so (for example, if it would be better value for money if a package of recommendations were all implemented at once).

Different organisations may need different approaches to implementation, depending on their size and function. Sometimes individual practitioners may be able to respond to recommendations to improve their practice more quickly than large organisations.

Here are some pointers to help organisations put NICE guidelines into practice:

1. Raise awareness through routine communication channels, such as email or newsletters, regular meetings, internal staff briefings and other communications with all relevant partner organisations. Identify things staff can include in their own practice straight away.
2. Identify a lead with an interest in the topic to champion the guideline and motivate others to support its use and make service changes, and to find out any significant issues locally.
3. Carry out a baseline assessment against the recommendations to find out whether there are gaps in current service provision.
4. Think about what data you need to measure improvement and plan how you will collect it. You may want to work with other health and social care organisations and specialist groups to compare current practice with the recommendations. This may also help identify local issues that will slow or prevent implementation.

5. Develop an action plan, with the steps needed to put the guideline into practice, and make sure it is ready as soon as possible. Big, complex changes may take longer to implement, but some may be quick and easy to do. An action plan will help in both cases.
6. For very big changes include milestones and a business case, which will set out additional costs, savings and possible areas for disinvestment. A small project group could develop the action plan. The group might include the guideline champion, a senior organisational sponsor, staff involved in the associated services, finance and information professionals.
7. Implement the action plan with oversight from the lead and the project group. Big projects may also need project management support.
8. Review and monitor how well the guideline is being implemented through the project group. Share progress with those involved in making improvements, as well as relevant boards and local partners.

NICE provides a comprehensive programme of support and resources to maximise uptake and use of evidence and guidance. See the into practice pages for more information.

Also see Leng G, Moore V, Abraham S, editors (2014) Achieving high quality care – practical experience from NICE. Chichester: Wiley.

Implementation Tools

Clinical Algorithm

Mobile Device Resources

Patient Resources

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

National Institute for Health and Care Excellence (NICE). Spondyloarthritis in over 16s: diagnosis and management. London (UK): National Institute for Health and Care Excellence (NICE); 2017 Feb 28. 31 p. (NICE guideline; no. 65).

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

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Guideline Developer(s)

National Institute for Health and Care Excellence (NICE) - National Government Agency [Non-U.S.]

Source(s) of Funding

National Institute for Health and Care Excellence (NICE)

Guideline Committee

Guideline Development Group

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

The effective management of conflicts of interests is an essential element in the development of the guidance and advice that National Institute of Health and Care Excellence (NICE) publishes. Please refer to the NICE Web site for the Policy on Conflicts of Interest.

The details of declared interests and the actions taken are shown in Appendix A in the full version of the guideline (see the "Availability of Companion Documents" field).

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Available from the National Institute for Health and Care Excellence (NICE) Web site . Also available for download in ePub or eBook formats from the NICE Web site .

Availability of Companion Documents

The following are available:

- Spondyloarthritis in over 16s: diagnosis and management. Full guideline. London (UK): National Institute for Health and Care Excellence (NICE); 2017 Feb. 205 p. (NICE guideline; no. 65). Available from the National Institute for Health and Care Excellence (NICE) Web site .
- Spondyloarthritis in over 16s: diagnosis and management. Appendices. London (UK): National Institute for Health and Care Excellence (NICE); 2017 Feb. (NICE guideline; no. 65). Available from the NICE Web site .
- Spondyloarthritis in over 16s: diagnosis and management. Baseline assessment tool. London (UK): National Institute for Health and Care Excellence (NICE); 2017 Feb. (NICE guideline; no. 65). Available from the NICE Web site .
- Spondyloarthritis in over 16s: diagnosis and management. Resource impact report. London (UK): National Institute for Health and Care Excellence (NICE); 2017 Feb. 10 p. (NICE guideline; no. 65). Available from the NICE Web site .
- Spondyloarthritis in over 16s: diagnosis and management. Resource impact template. London (UK): National Institute for Health and Care Excellence (NICE); 2017 Feb. (NICE guideline; no. 65). Available from the NICE Web site .
- The guidelines manual. London (UK): National Institute for Health and Care Excellence (NICE); 2012 Nov. Available from the NICE Web site .

Patient Resources

The following is available:

- Spondyloarthritis in over 16s: diagnosis and management. Information for the public. London (UK): National Institute for Health and Care Excellence (NICE); 2017 Feb. 10 p. (NICE guideline; no. 65). Available from the National Institute for Health and Care Excellence (NICE) Web site . Also available for download in ePub or eBook formats from the NICE Web site .

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This NGC summary was completed by ECRI Institute on April 24, 2017.

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